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SUPPLIER RELATIONSHIP MANAGEMENT: MODELS, CONSIDERATIONS AND IMPLICATIONS FOR DOD

STRATEGIC SUPPLY INDUSTRY STUDY COURSE

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The press routinely praises industry giants such as Wal-Mart, FedEx, American Honda and Dell for the innovative ways in which they manage suppliers and the impact these successful relationships have on their company's bottom line. The implication is that all firms need partnerships with their suppliers, and the more the better. Yet, is this true, or is the rush to partner hiding hidden costs and dangers? Does one size or model fit all or does the nature of the market or industry drive differences in supplier relationships? This paper begins by defining supplier relationship management (SRM) and why' it is needed, discusses various types of supplier relationships, examines several models for managing supplier relationships, addresses considerations and risks when implementing SRM, and concludes with a brief discussion of ¡mplications of SRM for the Department of Defense.

What is SRM and why is it needed?

SRM, "...the process that defines how a company interacts with its suppliers, is just one key part of the overall supply chain management process. According to Lambert, companies will have a wide range of relationships with suppliers, some close and others arms length. One of the ¡mportant features of SRM is that it represents a dramatic change in perspective for many firms, as it requires a "new way of thinking about collaboration with suppliers, demanding greater transparency and trust than many companies have, so far been comfortable with."" IDC, in a five-year forecast of the worldwide supply chain services market, identified three key aspects of SRM: collaboration, integration and trust. Trust is the foundation for firms and suppliers to enter into long-term relationships that allow them to share and integrate data as well as collaborate in the development of long-range plans that mutually benefit both parties.'" These factors are critically important, regardless of the type of relationship between buyer and supplier.

The pace of global competition is putting increasing pressure on firms to make their supply chains more competitive or risk going out of business. Finns naturally turned to their suppliers in an effort to cut costs and were often quick to switch to alternate suppliers if they could not meet demands for price and quality. Suppliers, on the other hand, often felt firms used heavy-handed tactics, attacking supplier margins to reduce costs rather than working' together to find ways to take cost out of the, process. SRM provides a structured way for firms and suppliers to enhance their relationships, increase profitability, and ultimately provide improved products and services to the end users (customers). The following sections introduce supplier relationships and present three models firms can use to manage these relationships.

Supplier relationships - spanning the full spectrum of cooperation and collaboration

There are a number of ways to define the spectrum of supplier relationships. Most span a range similar to that identified by Leenders and Flynn, which ranges from traditional relationships to partnerships and alliances. *A traditional* relationship with suppliers is one that ' uses short-term contracts based primarily on price. Firms switch between traditional suppliers more frequently in search of the best price and may have an arms length, adversarial relationship with them. *Preferred* suppliers meet the firm's expectations for quality, delivery or price and are able to respond to unexpected changes. They initiate discussions with the firm on ways to improve products and processes. *Certified* suppliers integrate their quality control system with the purchasing firm, helping to reduce total costs by eliminating duplication in inspection and quality control activities. *Prequalified* suppliers are those the firm has placed on a list of approved suppliers. Suppliers earn this status after a rigorous and in-depth analysis of their capabilities, costs and a number of other factors. Finally, *Strategic Partners and Strategic Alliances* rely on mutual trust and support, sharing of information, and teaming for continuous

¡mprovement.' Both partnerships and strategic alliances are "marked by long-term arrangements, large volume commitments, and joint product development and planning efforts." iven that'many firms have thousands of suppliers, how should a firm decide what type of relationship is most appropriate with each supplier?

SRM Models - 3 Approaches

Business and academic literature includes a variety of approaches and models for managing supplier relationships. The following three models are representative of the options available to firms as they determine appropriate ways to initiate and manage supplier relationships and understand how the nature of the product and environment influence the selection of the appropriate relationship model,

Partnership Model. Stock and Lambert identified four types of supplier relationships, ranging from arms length through partnerships, joint ventures and vertical integration (note the similarity to the previous relationship spectrum). While most relationships are arms length, with suppliers offering standard products or services to 'a wide range of customers, there are times when it is appropriate for firms to pursue partnerships with suppliers. Lambert defines a partnership as "a tailored business relationship based on mutual trust, openness, shared risk and shared rewards that results in business performance greater than would be achieved by two firms working together in the absence of partnership.

Firms can pursue one of three types of partnerships with suppliers: Type I, Type II or Type III. In a *Type I* arrangement, both organizations accept each other as partners and coordinate their activities and planning on a limited basis. Type I partnerships are often short-term and involve only one division or area within each organization. *Type II* partnerships are marked by the integration of activities between the two organizations and by long-term planning

that. involves multiple divisions or areas in both organizations. In *Type III* partnerships, there is a significant level' of integration between both organizations and each sees the other as a part of its own organization."" A majority of partnerships will be Type I while a firm will have a very limited number of Type III partnerships.

Developing partnerships requires a significant investment of time and money on the part of both organizations. Lambert designed a partnership model to help firms develop and manage these important relationships. His model (Figure 1) assesses the drivers, facilitators, and components that lead to successful partnership outcomes. *Drivers,* which are the reasons why firms should partner, include "asset/cost efficiencies, customer service improvements, marketing advantage, and profit stability/growth."[X] Drivers must exist for both organizations and must be strong enough to give each party a clear understanding of the benefits gained by partnering. *Facilitators,* which measure the supportiveness of the environment, include "corporate compatibility, similar managerial philosophy and techniques, mutuality, and symmetry."" Since facilitators examine the environment in both organizations, both parties should jointly evaluate these four areas. Lambert notes that while managers may be tempted to implement Type III partnerships with all of their suppliers, the appropriate type of partnership (if any) is based on the strength of the drivers and facilitators. If the drivers and facilitators are strong enough to pursue a partnership,

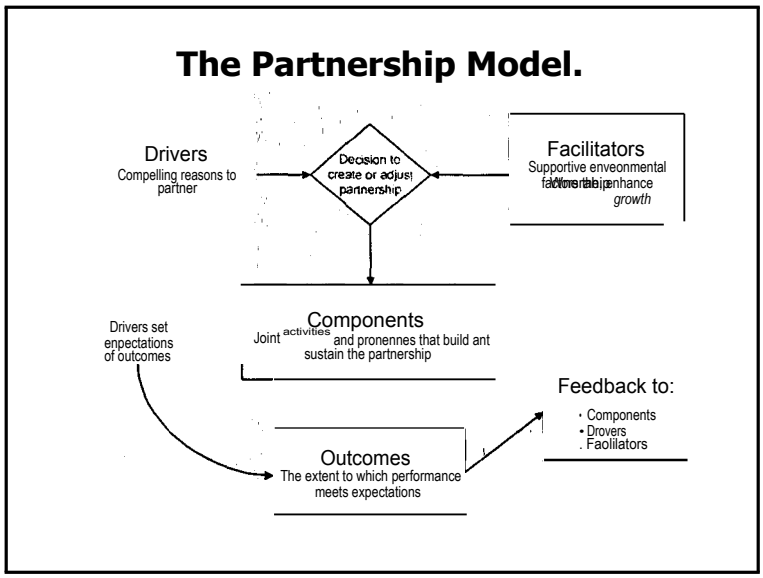

Figure 1""""

managers then use *components* (such as planning, joint operating controls, risk/reward sharing, etc.) to establish and manage the partnership. *Outcomes* measure how well the partnership is meeting the expectations outlined at the beginning and provide feedback critical to managing and improving the partnership. Dell Computer provides a great example of a company using partnerships with its suppliers. Over ninety percent of Dell's suppliers are hard-wired into the company through its website, valuechain.dell.com. This close relationship is one reason Dell was the only company in its competitive class to gain market share last year."

Operational complexity and market sophistication. Mould and Starr examined partnership relationships from the perspective of operational complexity and market sophistication. Operational complexity addresses the intricacy of components in the supply chain while market sophistication addresses factors that influence how components are bought and sold."" They argue firms and suppliers can successfully collaborate under certain conditions but trying to do so in the absence of these conditions is inappropriate and possibly counterproductive.

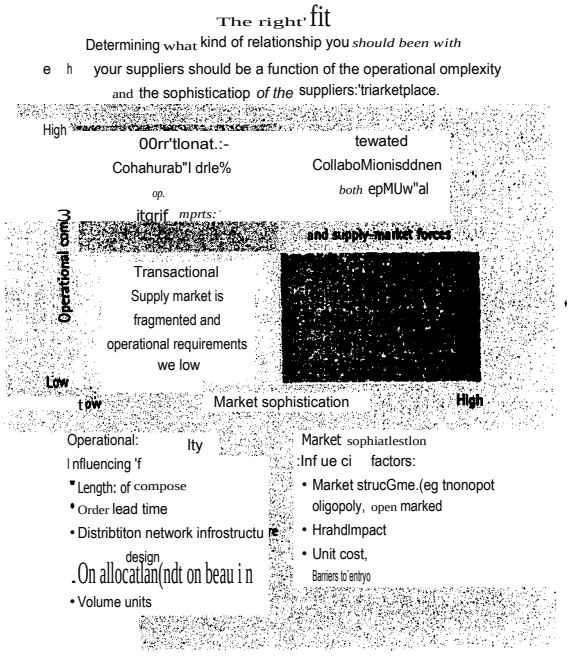

Figure 2""

As shown in Figure 2, there are four different types of buyer-supplier relationships based on the level of operational complexity and market sophistication. In *Transactional* relationships, cost is the primary driver when selecting a supplier and there are many suppliers, each as good as the next. *Unique* relationships are "something like marriages of convenience: they may be necessary, but they aren't deep."""" The authors use the example of the relationship of personal

computer makers to Microsoft - they all need some type of relationship with Microsoft to obtain Windows software but it is not a very complex relationship. *Operational* relationships are appropriate when buyers are very sensitive to any interruptions of supply but the end users are relatively indifferent about the brand of the components used by the buyer."" *Finally, Integrated* relationships are characterized by "shared risks, costs, profits and information almost without restriction" because the buyer and supplier operate in a: highly sophisticated market and the product demands both organizations communicate often."""

Once the buyer determines the most appropriate relationship to pursue with a supplier, the firm then needs to specifically define the structure of the relationship with respect to four main categories: "business objectives and strategies, technology infrastructure, process integration and organization."" Proper alignment of business objectives and strategies requires buyer and supplier' to agree on how to measure progress and how much information to share. Both firms must address how that information will be shared - what technological solution is most appropriate. Process integration must clearly distinguish which processes are shared between the two firms and which remain separate. Finally, any form of collaboration places demands on organizational models, roles and responsibilities.

The final question is whether both firms are ready for collaboration - do they have the capability, commitment and trust to be successful? Without the capability to deliver on promises, management commitment to dedicate necessary resources, and trust to solidify bonds between the two companies, the partnership will fail or achieve mediocre results at best. A leading paper products manufacturer's process improvement project is a great example of the commitment and trust required by senior leadership to implement change in their supplier relationships and throughout the firm's supply chain.

Supplier Portfolio Management. According to Bensaou, the push in industry and academic circles to move most supplier relationships from arms length to long-term strategic partnerships ignores the risk'and cost associated with developing an extensive network of supplier partnerships. Conventional wisdom held that Japanese automobile manufacturers relied heavily on partnerships with suppliers; yet, her survey of three U.S. and eleven Japanese automobile manufacturers showed the Japanese rely less on strategic partnerships than U.S. firms (Figure 3). She proposed and validated a framework for managing a portfolio of supplier relationships - a situation facing most firms as they juggle thousands of suppliers - based on contextual and managerial factors.

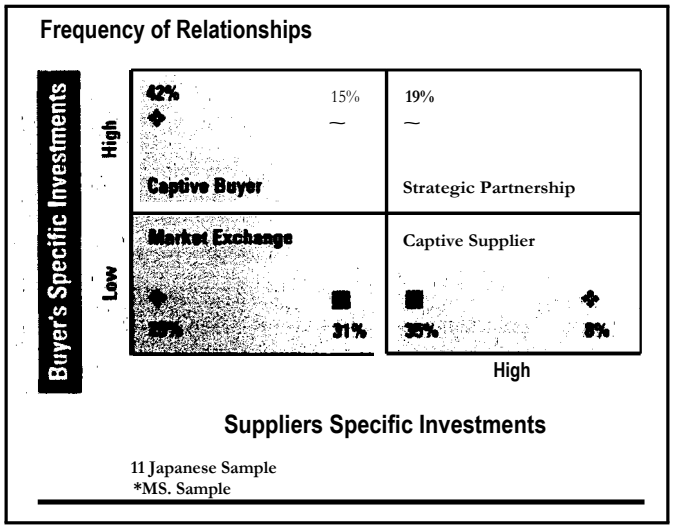

Figure 3"""""

Bensaou's model uses four types of buyer-supplier relationships: market exchange, captive buyer, strategic partnership and captive supplier (Figure 3). In her research of Japanese and U.S. firms, she found no one type of relationship superior to the others - each type can be well or poorly managed. Firms must choose the right approach based on contextual factors and management variables. Contextual factors include "the characteristics of the product exchanged and its underlying technology, the level of competition in the upstream market, and capabilities of suppliers available in the marketplace."'' Management variables include "information sharing practices, characteristics of boundary spanners' jobs (i.e., purchasing agents or engineers) and the social climate within the relationship."' For example, contextual factors in Strategic Partnerships include products with a high degree of customization, new technology,

and frequent design changes; competitive and concentrated markets with strong demand and high growth; and partner characteristics that include large multi-product supply houses, supplier proprietary technology, and active research and development programs. The management profile for Strategic Partnerships includes regular visits and use of guest engineers, large investments of time coordinating with supplier staffs, and a climate based on high levels of trust and commitment to the relationship." Honda America's relationship with many of its suppliers (use of guest engineers and significant supplier involvement, in up-front design processes) falls into the strategic partnership quadrant.

The final step for managers is to compare the capabilities resident in their relationship with the actual relationship requirements driven by the nature of the product and market. A match exists when there are both high capabilities and high requirements or low capabilities and low requirements. The risk lies in either under-designing or over-designing relationships. Heavy investment in relationship building when product and market characteristics call for simple data exchange lead to over-design while using simple methods to manage more complex products and markets leads to under-design. Limited Logistics, which distributes a variety of products ranging from clothing to bath and body products, successfully uses one model to deal with clothing manufacturers in Asia (hands on but low tech) and another to deal with beauty-products suppliers in the U.S. (looser relationship but more technology oriented). .

Business and academic journals include a number of other supplier relationship models, ranging from very simple two-dimensional characterizations (such as the Exit/Voice Model discussed by Gunther""") to very sophisticated models that use multiple variables and complex relationships (such as Cox's model that argues relationships between buyers and suppliers should be evaluated and managed based on the power of the buyer relative to the supplier' ...). What

considerations and risks - in terms of people, process and technology-' should firms also consider as part of their overall supplier relationship management strategy?

SRM: Considerations and Risks

People. As mentioned previously, trust and communication are vital to create strong supplier relationships. However, from an organizational standpoint, this is easier said than done. Building these relationships drives dramatic cultural changes in both firms and reframes how each views the other organization - not as the problem, but as the solution to mutual challenges. For example, when the relationship between Ford and its suppliers reached a breaking point, Ford looked to a new model, Total Value Management (TVM), to team with suppliers in an effort to reduce costs. The change, however, will take time. "It will take all of 2003 for Ford to get the teams set up and running. And then it will take a year or two to build the level of trust needed for all of us to open the books and work together," says the president of a major supplier trade association."""" Creating supplier partnerships also requires a heavy investment in training to support new quality assurance and control procedures and to ensure those involved in the process understand how the other firm operates. Firms that were successful in creating supplier partnerships instituted formal training programs for suppliers as well as their own personnel." Honda and Limited Logistics put a heavy emphasis on training so their employees not only understand their suppliers but also know when to step in and help the suppliers solve process or quality problems. There are no shortcuts to success - change takes time, trust, and commitment.

Process. SRM is a critical part of the overall supply chain management process. As such, firms cannot consider new or different SRM processes in isolation of the entire supply chain. As Lambert and Pohlen found, most companies rely on metrics with an internal focus to gauge how well they are doing. When looking across the supply chain, this internal focus fails to

capture how firms - suppliers - drive value or profitability. In fact, such a focus may be counterproductive as firms in each link of the chain may try to optimize their performance at the expense of the entire chain. They advocate using supplier and customer contribution reports to avoid such a situation and to capture revenue implications across the supply chain."" Dell's success is driven not by the technology used to manage supplier relationships but by the *processes* in place to manage those relationships.'v" IP spent nearly a year mapping and streamlining its processes to derive maximum value from its supply chain. The lesson is clear - firms must have a detailed understanding of their processes before attempting to create partnerships with suppliers. A second' critical process consideration is how firms evaluate their relationships with suppliers. Simpson, et. al. found less than half of firms responding to a survey had a formal supplier evaluation program in place and that qualitative factors were usually overlooked in favor of quantitative factors. Evaluations that only consider price, quality and delivery overlook the importance of qualitative factors such as the frequency of inter-company communication, partnership equity, and level of trust `M

Technology. The rush to implement the latest technology is often a recipe for disaster. A leading paper product manufacturer's process improvement project focuses on process first, then technology. In supplier relationships, the mantra is process pull versus technology push. PRTM, in working with hundreds of firms, found those who succeeded in improving supplier relationships and their supply chains were those that focused first on process and then on selecting the right technology to leverage those processes. Shore identified four stages of IT in supply chains. In the first stage, hard copy dominates and IT and telecommunications play minor roles. Electronic Data Interchange in the second stage permits the electronic exchange of routine business transactions. The third stage is marked by enterprise wide systems that integrate

and coordinate operations using a centralized database. The final stage involves strategic alliances, extensive information flows, and decision support, systems."" Firms do not need to pursue stage four IT if their market, products or suppliers do not require that level of sophistication or cannot support it. Limited Logistics does not invest in expensive IT systems with clothing manufacturers in China since they lack IT sophistication and size (they may only have a few people). When firms are ready to invest in technology to manage supplier relationships, they can turn to a variety of firms (Manugistics, SAS, SAP, PeopleSoft, Sun, etc.) that provide comprehensive software and support services.

Conclusions and Implications for DoD

As this literature review shows, there are a number of models and software applications available to help firms manage supplier relationships. However, unless firms first invest time to understand, streamline and improve their processes and supplier interface they will not achieve the results they desire. There is no silver bullet or magic solution resident in anymodel or IT package. What does this mean for DoD's supplier relationships and supply chain management?

Several SRM models place heavy emphasis on context and understanding the characteristics of the market in which the firm operates. DoD also must consider the context in which it deals with suppliers. Should DoD pursue a hybrid model to address peacetime and wartime support? DoD must also carefully examine its processes - within each service, between the services, and with suppliers - before it embarks on costly IT implementation projects. Based on briefings presented at DLA Day, the services are independently pursuing IT solutions. DoD needs to take a step back and first examine its processes to develop an integrated process solution. The road ahead is steep and treacherous - having a map that clearly shows how the air,

land and sea components interact is a critical first step to building strong supplier relationships and leveraging the supply chain to provide support for the warfighter.

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